

Recovery Plan Action Status

Plan Name: Appalachian Elktoe

Plan Status: Final

Plan Date: 26-Aug-96

Lead Agency: USFWS

Lead Office: Asheville Ecological Services Field Office

(258-3939)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Appalachian elktoe (Alasmidonta raveneliana)	1	1	Utilize existing legislation and regulations to protect species and its habitat	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Law Enforcement Division, U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Army Corps of Engineers, State Conservation Agencies, Tennessee Valley Authority , U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Other: Law Enforcement, Other: Regulations	Internal Administrative, Internal Field Assistance, Internal Technical Assistance	** For all tasks with Responsible Parties: SCA - In North Carolina, these are the North Carolina Department of Agriculture; North Carolina Department of Environment, Health, and Natural Resources; North Carolina Division of Parks and Recreation, and North Carolina Wildlife Resources Commission. In Tennessee, the Tennessee Department of Environment and Conservation, Tennessee Wildlife Resources Agency, and Tennessee Department of Agriculture; This task is continuous and will be necessary and cannot be completed until species is recovered/delisted

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Appalachian elktoe (Alasmidonta raveneliana)	2	10	Develop artificial holding and propagation techniques; reintroduce species into historic habitat; and, if needed, augment existing populations	Partially Complete	FY 1995 - FY 1999		Contract , U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Research: Habitat Requirements, Research: Propagation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance	1998 - study to determine likely fish host; 1999 - additional host studies; 2004 additional hosts identified; 2006 initiated artificial propagation studies using surrogate species; 2007-2008 began conducting genetic studies and evaluating need potential for augmentation of Cheoah River population. 2009 - 2011, provided funding to NCSU and NCWRC in cooperative effort to hold and conduct controlled propagation of the Appalachian elktoe; also, in 2011, efforts to augment Cheoah River population were initiated.
Appalachian elktoe (Alasmidonta raveneliana)	2	11	Develop and utilize cryopreservation techniques	Not Started			Contract , U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	
Appalachian elktoe (Alasmidonta raveneliana)	2	12	Develop and implement a monitoring program	Ongoing Current	FY 2000 - FY 2004		U.S. Forest Service, State Conservation Agencies, Tennessee Valley Authority , U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Research: Habitat Status, Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	conducted as personnel and funding allow; will be necessary until species has been delisted

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Appalachian elktoe (Alasmidonta raveneliana)	3	13	Annually assess recovery program and modify program and plan where required	Ongoing Current	FY 2007		U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Army Corps of Engineers, State Conservation Agencies, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Work type not yet selected	Internal Technical Assistance, Species Expert	conducted yearly; 5-year review initiated in 2006
Appalachian elktoe (Alasmidonta raveneliana)	1	2	Work with appropriate Federal and State agencies to identify actions that could negatively affect the species and incorporate protective measures into such actions	Ongoing Current	FY 1995 - FY 1999		U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Army Corps of Engineers, State Conservation Agencies, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Acquisition: Easement, Acquisition: Fee Title, Management: Habitat Maintenance and Manipulation, Management: Land Use, Management: Planning, Other: Information and Education, Other: Law Enforcement, Other: Regulations, Research: Demographic Studies, Research: Environmental Contaminants, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys, Research: Propagation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	continous - will be required and on-going until species is delisted

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Appalachian elktoe (Alasmidonta raveneliana)	1	3	Encourage establishment of outstanding resource water designations and other protective strategies as a means of protecting the species	Partially Complete	FY 2007		U.S. Environmental Protection Agency, U.S. Forest Service, The Nature Conservancy, U.S. Army Corps of Engineers, State Conservation Agencies, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Acquisition: Fee Title	Contract	Cost unknown; provided \$2 million to NCWRC through RLA Grant to assist in purchase of lands in Little Tennessee River watershed; 2007 submitted draft technical support document to NCDWQ to assist in development of site-specific management plan for Nolichucky River basin.
Appalachian elktoe (Alasmidonta raveneliana)	1	4	Conduct research necessary for species' management and recovery; i.e., habitat requirements, biology, and treat analyses	Ongoing Current	FY 1995 - FY 1999		U.S. Forest Service, State Conservation Agencies, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Research: Demographic Studies, Research: Disease, Research: Environmental Contaminants, Research: Genetics, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys, Research: Propagation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	continuous; 2005 to date, NCWRC monitoring of Little Tenn. River population in 2005 detected a significant and on-going decline of this population and several studies are underway in an attempt to determine the cause(s) (cooperators include the Service, NCWRC, USGS, NCSU, WNCU and others).
Appalachian elktoe (Alasmidonta raveneliana)	2	5	Meet with local government officials and business interests and elicit their support for recovery	Ongoing Current	FY 1995 - FY 1999		U.S. Environmental Protection Agency, U.S. Forest Service, The Nature Conservancy, U.S. Army Corps of Engineers, State Conservation Agencies, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Management: Land Use, Management: Planning, Other: Information and Education, Other: Regulations	Labor type not yet selected	continuous

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Appalachian elktoe (Alasmidonta raveneliana)	2	6	Develop information and education program and present	Ongoing Current	FY 1995 - FY 1999		U.S. Environmental Protection Agency, U.S. Forest Service, The Nature Conservancy, U.S. Army Corps of Engineers, State Conservation Agencies, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Other: Information and Education	Labor type not yet selected	Task duration: 1 year to develop, then continuous
Appalachian elktoe (Alasmidonta raveneliana)	1	7	Based on biological and threat analyses, investigate need for management and implement where needed	Ongoing Current	FY 1995 - FY 1999		U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Army Corps of Engineers, State Conservation Agencies, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Management	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Priority 1,2, or 3, depending on result of 2.1, 2.2, and 2.3; will be continuous and necessary until species has been delisted
Appalachian elktoe (Alasmidonta raveneliana)	2	8	Determine number of individuals required to maintain viable population	Not Started			U.S. Fish and Wildlife Service, Law Enforcement Division, Contract, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	Cost unknown
Appalachian elktoe (Alasmidonta raveneliana)	2	9	Search for additional populations and suitable habitat for reintroduction	Ongoing Current	FY 1995 - FY 1999		U.S. Forest Service, State Conservation Agencies, Contract, U.S. Fish and Wildlife Service, Office of Endangered Species, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	conducted as funding and personnel availability allow.